

CLAIMS

1. Beads of expandable vinylaromatic polymers which comprise:

- a) a matrix obtained by polymerizing 50-100% by weight of  
5 one or more vinylaromatic monomers and 0-50% by weight of  
at least one copolymerizable monomer;
- b) 1-10% by weight, calculated with respect to the polymer  
(a), of an expanding agent englobed in the polymeric matrix;
- 10 c) 2 ppm-2% by weight, calculated with respect to the polymer (a), of an anti-lumping additive, distributed on the  
surface of the beads, selected from oxides of metals of  
groups IB and VIIIB or from mixtures consisting of oxides  
of metals of groups IB, IIB and VIIIB and esters of C<sub>8</sub>-C<sub>25</sub>  
15 fatty acids with the same metals.

2. The beads of expandable vinylaromatic polymers according to claim 1, having an average molecular weight Mw ranging from 50,000 to 250,000.

3. The beads of expandable vinylaromatic polymers according  
20 to claim 1 or 2, wherein the beads are substantially  
spherical with an average diameter ranging from 0.2 to 2  
mm.

4. The beads of expandable vinylaromatic polymers according  
to any of the previous claim, wherein the beads comprise  
25 fillers of athermanous materials in quantity ranging

from 0.05 to 25% by weight.

5. A process for the preparation of beads of expandable vinylaromatic polymers which comprises:

- polymerizing 50-100% by weight of one or more vinylaromatic monomers and 0-50% by weight of at least one copolymerizable monomer;
- englobing an expanding agent in the polymeric matrix; and
- distributing on the surface of the beads obtained 2 ppm-2% by weight, calculated with respect to the polymer, of an anti-lumping additive selected from oxides of metals of groups IB and VIIIB or from mixtures consisting of oxides of metals of groups IB, IIB and VIIIB and esters of C<sub>8</sub>-C<sub>25</sub> fatty acids with the same metals.

6. The process according to claim 5, wherein the polymerization is carried out in aqueous suspension or in continuous mass.

7. The process according to claim 5 or 6, wherein the polymerization is carried out in suspension in the presence of a suspending agent, an initiating system and an expanding system.

8. The process according to claim 7, wherein the expanding system consists of liquid substances with a boiling point ranging from 10 to 100°C.

9. The process according to any of the previous claims

from 5 to 8, which comprises:

1. coating the beads with a liquid antistatic agent such as amines, tertiary alkylamines, ethylene oxide-propylene oxide copolymers;
  - 5 2. applying the coating to the above beads, said coating essentially consisting of a mixture of mono-, di- and tri-esters of glycerin (or other alcohols) with fatty acids; and
  3. distributing on the surface of the beads, the anti-  
10 lumping additive preferably selected from powders of oxides of iron ( $\text{Fe}_2\text{O}_3$ ), copper ( $\text{CuO}$ ) and zinc ( $\text{ZnO}$ ), optionally mixed with the corresponding ester of fatty acids.
10. The process according to any of the claims from 5 to  
15 9, wherein the anti-lumping additive is used in the form of powders with an average particle-size ranging from 0.1 to 50  $\mu\text{m}$ .

20

25